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**WHAT IS CLAIMED IS:**

1. An animal model for measuring visceral pain comprising a balloon catheter and an implantable sensor module having transcutaneous telemetering ability.
2. An animal model according to claim 1 wherein the balloon catheter is an implantable balloon catheter.
3. An animal according to claim 2 wherein the implantable balloon catheter comprises fixation means preferably consisting of two nodes to fixate the catheter.
4. An animal according to claim 2 wherein the balloon catheter is implanted into the duodenum.
5. An animal according to any of the preceding claims, wherein the implantable sensor module is capable of accepting a plurality of input signals.
6. An animal according to claim 5 wherein the implantable sensor module is set up to receive both visceromotor and pseudoaffective responses of the test animal.
7. An animal according to claim 5 wherein the implantable sensor comprises at least two input ports.
8. An animal according to claim 5 wherein the implantable sensor is connected to a bipolar electrode pair and a blood catheter.

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9. A balloon catheter consisting of biocompatible tubing (1) closed at one end with elastic material (2), wherein said elastic material is attached to the biocompatible tubing at a position (3) proximal from the tube end (4) and at the end of the biocompatible tubing (5) and said tubing end is rigidly sealed (6), further comprising a number of holes (7) distal from attachment point (3) and characterized in that said balloon catheter comprises fixation means that are positioned proximal from the tube end..
10. A system for measuring visceral pain comprising:  
a balloon catheter according to claim 9 ;  
an implantable sensor module having transcutaneous telemetering ability; and  
an external module capable to monitor and process the telemetered signals.
11. A system according to claim 10 wherein the balloon catheter is implanted in the duodenum of the test animal; and wherein the implantable sensor module is set up to receive both visceromotor and pseudoaffective responses of the test animal.
12. A system according to claims 10 or 11 further comprising means for introducing a measured volume of inflation medium through the proximal end of the balloon catheter.
13. A system according to claim 12 wherein the means for introducing a measured volume of inflation medium comprise a syringe.
14. A kit for generating an animal according to claim 1 comprising a balloon catheter; an implantable sensor module having transcutaneous telemetering ability; a bipolar electrode pair; and a blood catheter.